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Responses to Public Comments Received on the Proposal of Jones Road Ground Water Plume to EPA National Priority List

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Support Document for the Revised National Priorities List Final Rule - September 2003

State, Tribal, and Site Identification Center
Office of Solid Waste and Emergency Response
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ABSTRACT

Pursuant to Section 105(a)(8)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), the U.S. Environmental Protection Agency (EPA) periodically adds hazardous waste sites to the National Priorities List (NPL). Prior to actually listing a site, EPA proposes the site in the *Federal Register* and solicits public comments.

This document provides responses to public comments received on one site proposed on June 14, 2001 (66 FR 32287), two sites proposed on September 5, 2002 (67 FR 56794), and two sites proposed on April 30, 2003 (68 FR 23094). All of the sites are added to the NPL based on an evaluation under the HRS. These sites are being added to the NPL in a final rule published in the *Federal Register* in September 2003.

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EXECUTIVE SUMMARY

Section 105(a)(8)(B) of CERCLA, as amended by SARA, requires that the EPA prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. An original NPL was promulgated on September 8, 1983 (48 FR 40658). CERCLA also requires the EPA to update the list at least annually.

This document provides responses to public comments received on one site proposed on June 14, 2001 (66 FR 32287), two sites proposed on September 5, 2002 (67 FR 56794), and two sites proposed on April 30, 2003 (68 FR 23094). All of the sites are added to the NPL based on an evaluation under the HRS. These sites are being added to the NPL in a final rule published in the *Federal Register* in September 2003.

INTRODUCTION

This document explains the rationale for adding seven sites to the NPL of uncontrolled hazardous waste sites and also provides the responses to public comments received on the sites. The EPA proposed one site on June 14, 2001 (66 FR 32287), two sites on September 5, 2002 (67 FR 56794), and two sites on April 30, 2003 (68 FR 23094). All of the sites are added to the NPL based on an evaluation under the HRS. These sites are being added to the NPL in a final rule published in the *Federal Register* in September 2003.

Background of the NPL

In 1980, Congress enacted CERCLA, 42 U.S.C. Sections 9601 *et seq*. in response to the dangers of uncontrolled hazardous waste sites. CERCLA was amended on October 17, 1986, by SARA, Public Law No. 99-499, stat., 1613 *et seq.* To implement CERCLA, EPA promulgated the revised National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR Part 300, on July 16, 1982 (47 FR 31180), pursuant to CERCLA Section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. On March 8, 1990 (55 FR 8666), EPA further revised the NCP in response to SARA.

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include

> criteria for determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable, take into account the potential urgency of such action, for the purpose of taking removal action.

Removal action involves cleanup or other actions that are taken in response to emergency conditions or on a short-term or temporary basis (CERCLA Section 101(23)). Remedial action tends to be long-term in nature and involves response actions that are consistent with a permanent remedy for a release (CERCLA Section 101(24)). Criteria for placing sites on the NPL, which makes them eligible for remedial actions financed by the Trust Fund established under CERCLA, were included in the HRS, which EPA promulgated as Appendix A of the NCP (47 FR 31219, July 16, 1982). On December 14, 1990 (56 FR 51532), EPA promulgated revisions to the HRS in response to SARA, and established the effective date for the HRS revisions as March 15, 1991.

Section 105(a)(8)(B) of CERCLA, as amended, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The list, which is Appendix B of the NCP, is the NPL.

An original NPL of 406 sites was promulgated on September 8, 1983 (48 FR 40658). At that time, an HRS score of 28.5 was established as the cutoff for listing because it yielded an initial NPL of at least 400 sites,

as suggested by CERCLA. The NPL has been expanded several times since then, most recently on April 30, 2003 (68 FR 23077). The Agency also has published a number of proposed rulemakings to add sites to the NPL. The most recent proposal was on April 30, 2003 (68 FR 23094).

Development of the NPL

The primary purpose of the NPL is stated in the legislative history of CERCLA (Report of the Committee on Environment and Public Works, Senate Report No. 96-848, 96th Cong., 2d Sess. 60 [1980]):

> The priority list serves primarily informational purposes, identifying for the States and the public those facilities and sites or other releases which appear to warrant remedial actions. Inclusion of a facility or site on the list does not in itself reflect a judgment of the activities of its owner or operator, it does not require those persons to undertake any action, nor does it assign liability to any person. Subsequent government actions will be necessary in order to do so, and these actions will be attended by all appropriate procedural safeguards.

The purpose of the NPL, therefore, is primarily to serve as an informational and management tool. The identification of a site for the NPL is intended primarily to guide EPA in determining which sites warrant further investigation to assess the nature and extent of the human health and environmental risks associated with the site and to determine what CERCLA-financed remedial action(s), if any, may be appropriate. The NPL also serves to notify the public of sites EPA believes warrant further investigation. Finally, listing a site may, to the extent potentially responsible parties are identifiable at the time of listing, serve as notice to such parties that the Agency may initiate CERCLA-financed remedial action.

CERCLA Section 105(a)(8)(B) directs EPA to list priority sites among the known releases or threatened release of hazardous substances, pollutants, or contaminants, and Section 105(a)(8)(A) directs EPA to consider certain enumerated and other appropriate factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types of releases. Where other authorities exist, placing sites on the NPL for possible remedial action under CERCLA may not be appropriate. Therefore, EPA has chosen not to place certain types of sites on the NPL even though CERCLA does not exclude such action. If, however, the Agency later determines that sites not listed as a matter of policy are not being properly responded to, the Agency may consider placing them on the NPL.

Hazard Ranking System

The HRS is the principle mechanism EPA uses to place uncontrolled waste sites on the NPL. It is a numerically based screening system that uses information from initial, limited investigations -- the preliminary assessment and site inspection -- to assess the relative potential of sites to pose a threat to human health or the environment. HRS scores, however, do not determine the sequence in which EPA funds remedial response actions, because the information collected to develop HRS scores is not sufficient in itself to determine either the extent of contamination or the appropriate response for a particular site. Moreover, the sites with the highest scores do not necessarily come to the Agency's attention first, so that addressing sites strictly on the basis of ranking would in some cases require stopping work at sites where it was already underway. Thus, EPA relies on further, more detailed studies in the remedial investigation/feasibility study that typically follows listing.

The HRS uses a structured value analysis approach to scoring sites. This approach assigns numerical values to factors, that relate to or indicate risk, based on conditions at the site. The factors are grouped into three categories. Each category has a maximum value. The categories include:

- likelihood that a site has released or has the potential to release hazardous substances into the environment;
- characteristics of the waste (toxicity and waste quantity); and
- people or sensitive environments (targets) affected by the release.

Under the HRS, four pathways can be scored for one or more threats:

- Ground Water Migration (S_{gw})
  - drinking water
- Surface Water Migration (S_{sw})
  These threats are evaluated for two separate migration components (overland/flood and ground water to surface water).
  - drinking water
  - human food chain
  - sensitive environments
- Soil Exposure (S_s)
  - resident population
  - nearby population
  - sensitive environments
- Air Migration (S_a)
  - population
  - sensitive environments

After scores are calculated for one or more pathways according to prescribed guidelines, they are combined using the following root-mean-square equation to determine the overall site score (S), which ranges from 0 to 100:

$$S = \sqrt{\frac{S_{gw}^2 + S_{sw}^2 + S_s^2 + S_a^2}{4}}$$

If all pathway scores are low, the HRS score is low. However, the HRS score can be relatively high even if only one pathway score is high. This is an important requirement for HRS scoring because some extremely dangerous sites pose threats through only one pathway. For example, buried leaking drums of hazardous substances can contaminate drinking water wells, but -- if the drums are buried deep enough and the substances not very volatile -- not surface water or air.

Other Mechanisms for Listing

Aside from the HRS, there are two other mechanisms by which sites can be placed on the NPL. The first of these mechanisms, authorized by the NCP at 40 CFR 300.425(c)(2), allows each State and Territory to designate one site as its highest priority regardless of score.

The last mechanism, authorized by the NCP at 40 CFR 300.425(c)(3), allows listing a site if it meets all three of these requirements:

- Agency for Toxic Substances and Disease Registry (ATSDR) of the U.S. Public Health Service has issued a health advisory that recommends dissociation of individuals from the release;
- EPA determines the site poses a significant threat to public health; and
- EPA anticipates it will be more cost-effective to use its remedial authority than to use its emergency removal authority to respond to the site.

Organization of this Document

Each section that follows addresses site-specific public comments. The sites are arranged by EPA Region and are listed alphabetically by state and site name. Each site discussion begins with a list of commenters, followed by a site description, a summary of comments, and Agency responses. A concluding statement indicates the effect of the comments on the HRS score for the site.

Glossary

The following acronyms and abbreviations are used throughout the text:

Agency	U.S. Environmental Protection Agency
ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Sections 9601 *et seq.*, also known as Superfund
EPA	U.S. Environmental Protection Agency
HRS	Hazard Ranking System, Appendix A of the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
HRS Score	Overall site score calculated using the Hazard Ranking System; ranges from 0 to 100
NCP	National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300
NPL	National Priorities List, Appendix B of the NCP
NPL-###	Public comment index numbers as recorded in the Superfund Docket in EPA Headquarters and in Regional offices
PA/SI	Preliminary Assessment/Site Inspection
PRP	Potentially Responsible Party
RCRA	Resource Conservation and Recovery Act of 1976 (U.S.C. 9601-6991, as amended)
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision, explaining the CERCLA-funded cleanup alternative(s) to be used at an NPL site
SARA	Superfund Amendments and Reauthorization Act of 1986, Public Law No. 99-499, stat., 1613 *et seq.*

Region 6

2.1 Jones Road Ground Water Plume, Harris County, Texas

2.1.1 List of Commenters/Correspondents

SFUND-2003-0009-0121	Comment dated June 27, 2003, from Gloria G. Selby, secretary of the Jones Road Coalition for Safe Drinking Water, Houston, Texas
SFUND-2003-0009-0122	Comment dated June 30, 2003, from Donna M. Hofbauer and Joseph A. Hofbauer, private citizens
SFUND-2003-0009-0123	Comment dated June 30, 2003, from a private citizen
SFUND-2003-0009-0139	Comment dated June 25, 2003, from Honorable John R. Carter, Member of Congress
SFUND-2003-0009-0094	Correspondence dated February 4, 2003, from the Honorable Rick Perry, Governor of Texas

2.1.2 Site Description

The Jones Road Ground Water Plume site is located approximately one-half mile north of the intersection of Jones Road and FM 1960 in a mixed residential/urban/light industry area outside the city limits of northwest Houston, Harris County, Texas. Drinking water wells have been contaminated with cis-1,2-dichloroethene (DCE), tetrachloroethene (PCE), and tricholorethene (TCE). PCE has been detected in drinking water wells above EPA's maximum contaminant level (MCL) of 5.0 µg/L.

During a routine sampling of public wells by the Texas Commission on Environmental Quality's (TCEQ's) Houston office in December 2000, PCE, DCE, and chloromethane were detected in a public well supplying drinking water to approximately 18 employees, 90 children in childcare, and 150 to 200 students at a gymnasium. Subsequent samples collected on January 25 and May 2, 2001, confirmed the presence of PCE, DCE, and chloromethane in the public drinking water supply well.

During the site inspection in March and April of 2002, TCEQ collected samples from 43 drinking supply wells in Harris County and found concentrations of PCE at or above the MCL in eight wells. Concentrations of PCE in ground water samples were as high as 128 µg/L. As a result, filtration systems were placed on those eight wells.

The source of the PCE, TCE, and DCE contamination is unidentified, though previous investigations have suggested several potential source areas near the affected drinking water wells. Several businesses within the area use chlorinated solvents, one of which is Bell Dry Cleaners. In June 2001, a phase I environmental assessment was conducted at Bell Dry Cleaners, and leakage was discovered from a dry cleaning machine into the storm drains. PCE and vinyl chloride were found in ground water and soil samples collected from the Bell Dry Cleaners facility during the environmental assessment. On May 1,

2002, TCEQ initiated an emergency order which directed the owner of Bell Dry Cleaners and the owner of the property to, among other actions, maintain the current filtration systems, sample all wells within a half mile of the facility and add filtration systems to any new wells with contamination, investigate and report on the nature and extent of the contamination, and conduct any necessary further investigation. In May 2002, Bell Dry Cleaners volunteered to stop using PCE. On August 21, 2002, an order was issued affirming modifications to the May 1, 2002, emergency order. This ordered the facility and property owners to continue cessation of all use of PCE at that location, grant access for remediation, and add a deed restriction to the shopping center property that prohibits use of PCE.

Based on samples collected in May 2003, 23 wells have had detections of PCE at or above the EPA MCL of 5 parts per billion (ppb). Twenty-five wells have had detections of PCE below the MCL. Since 2002, filtration systems have been placed on the 24 wells with levels of PCE at or above the MCL.

Public and private drinking water wells serving residents, workers, and students have been found to be contaminated with chlorinated solvents above MCLs and other EPA health-based drinking water standards.

2.1.3 Summary of Comments/Correspondence

The Honorable Rick Perry, Governor of Texas, supported listing the Jones Road Ground Water Plume site on the NPL. The Honorable John R. Carter, Member of Congress, also supported the listing of the site on the NPL, and added that the contamination needs to be addressed immediately.

The Jones Road Coalition for Safe Drinking Water (herein referred to as the coalition), as well as Ms. Donna M. Hofbauer and Mr. Joseph A. Hofbauer, commented in support of listing the Jones Road Ground Water Plume site on the NPL, but also stated that the documents used in the HRS documentation package did not adequately represent the severity of the situation in this area and in fact, at times "may actually downplay the problem in an effort to relieve the U.S. Environmental Protection Agency ('Agency') of the responsibility for taking the critical actions necessary to protect human health and the environment." A comment received from a private citizen also indicated that the severity of the plume "requires much more attention than what is being given to it."

2.1.3.1 Support for Listing

The Honorable John R. Carter stated that "[a]pproximately 600 residents of the [Jones Road] area, who rely on these wells for their water, are facing pollution of their drinking water by this plume." He commented that any delay in the cleanup of this area "would be seriously detrimental to this community." He urged EPA to "give the Jones Road Ground Water Plume site the official designation [as an NPL site] this Fall, so that the work to solve this problem can begin."

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that this site has scored high enough to be placed on the NPL; however, they would have preferred that "this issue be corrected without placing resident homes on a Superfund list." They expressed concern that "[t]here appears [to be] sufficient evidence to support an emergency clean-up action to retard the further migration of this toxic contaminant into nearby un-impacted wells." They requested "that this contamination issue be

elevated to the highest priority and the Agency consider taking Emergency Actions under Superfund to address the problem."

The coalition stated that it would have preferred that "those parties responsible for the contamination would have been held accountable in a way that would positively effect our groundwater quality." The coalition asserted that "it does appear that moving ahead with the EPA [decision to list the site] is the logical process to follow in dealing with this situation."

Ms. Hofbauer and Mr. Hofbauer also expressed concern that "[a]s the Agency 'studies this problem' over the next 2 to 4 years additional wells are being degraded and people continue to be exposed."

In response, EPA has added Jones Road Ground Water Plume site to the NPL. Listing makes a site eligible for remedial action funding under CERCLA, and EPA will examine the site to determine what response, if any, is appropriate. Actual funding may not necessarily be undertaken in the precise order of HRS scores, however, and upon more detailed investigation may not be necessary at all in some cases. EPA will determine the need for using Superfund monies for remedial activities on a site-by-site basis, taking into account State priorities, further site investigation, other response alternatives, and other factors as appropriate. EPA will not stop work at some sites to begin work at other higher-scoring sites added to the NPL more recently.

With regard to the commenters' preference for addressing issues at this site without placing residential homes on a Superfund list, although the boundaries of an NPL site generally are not defined when a site is placed on the NPL (see Section 2.1.3.3, Extent of Site), at the present time, the contamination which is the focus of the listing is the contaminated ground water plume from which these homes draw drinking water.

With respect to the commenters' concern that there be an "an emergency clean-up action to retard the further migration of this toxic contaminant into nearby un-impacted wells" and that "this contamination issue be elevated to the highest priority and the Agency consider taking Emergency Actions under Superfund to address the problem," before the ground water can be cleaned up, the immediate threat to human health must be addressed. Therefore, TCEQ has responded by placing filtration systems on all homes at which contamination was detected at a level greater than the MCL. It is necessary to perform the RI/FS to determine the complete extent of the plume and determine the best remedial action. The RI/FS for this site has started on August 25, 2003, and is expected to be completed by the end of the year.

2.1.3.2 Response Process

Ms. Hofbauer and Mr. Hofbauer commented that they are concerned about the "slow process to be followed by the Agency when correcting this problem following Superfund guidelines." They stated that they have been informed that "it will be at least two years until the Agency completes a Site Investigation" and that "it may take in excess of 15 years to remediate the problem." They indicated that "there is no guarantee that the water quality will be cleaned to pre-contamination levels." They expressed concern over the length of time "it has taken to place the site on the NPL" because, during this time, an "additional 9 wells were found contaminated" indicating that the plume is "migrating quickly through the aquifer."

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, stated that this plume "impacts at least 200 residents directly or indirectly" and that, if it reaches the nearby MUD [municipal urban district], "thousands of additional residents will be impacted."

The coalition commented that it is "supportive to the EPA's mandate to safeguard the natural environment," that the ground water should be free of hazardous substances, and that EPA's "primary consideration was remediating the contaminant situation." They disagree with the "timetable and impact of decisions the Agency may take." The coalition asserted that besides the sampling that has already been done, little else has been done to correct the situation. It further commented that the plume has spread and is now affecting more wells and that residents on the "edge of the plume . . . feel strongly that they should not be compelled to wait for some six years for study and planning (while their wells become contaminated), but would rather see things move along at a less sedate pace." The coalition also stated that many residents with contaminated wells "do not want to wait years for the Agency to begin pumping and treating, if you can quite quickly determine that this is the proper course of action." It believes this is a "profoundly bureaucratic process, a reminder to the Agency representatives dealing with this issue that real human beings with families and concerns are being affected by inaction."

In response, these comments have no impact on the site score and do not undermine the basis for the listing decision. The Agency has in place an orderly procedure for identifying sites where releases of substances addressed under CERCLA have occurred or may occur, placing such sites on the NPL, evaluating the nature and extent of the threats at such sites, responding to those threats, and deleting sites from the NPL. The purpose of the initial two steps is to develop the NPL, which identifies for the States and the public those sites that appear to warrant remedial action (56 FR 35842, July 29, 1991). The evaluation or RI/FS phase involves onsite testing to assess the nature and extent of the public health and environmental risks associated with the site and to determine what CERCLA-funded remedial actions, if any, may be appropriate. After a period of public comment, the agency responds to those threats by issuing a record of decision which selects the most appropriate alternative. The selected remedy is implemented during the remedial design/remedial action phase. Finally, the site may be deleted from the NPL when the Agency determines that no further response is appropriate. The State of Texas has installed filtration systems on 24 residential wells which are tested quarterly. The RI/FS phase for this site was initiated on August 25, 2003. This investigation will define the plume area more accurately and identify alternatives for remedial action.

Regarding the comments that an NPL listing will delay remediation of the site, including a site on the NPL does not necessarily cause EPA to delay the RI/FS phase of the process. Once a site is proposed to the NPL, further investigations may be initiated to determine the appropriate response action(s) for addressing the contamination at a site. An NPL listing may facilitate achieving a comprehensive cleanup that is protective of human health and the environment. EPA will work to ensure that cleanup is prompt and cost effective.

2.1.3.3 Extent of Site

A private citizen commented that the contaminant plume is more extensive than represented in the HRS package and that "the number of contaminated wells has increased to 51 and the total area has increased five fold" increasing the boundaries of the plume. "The new boundaries are; northern boundary–North of

Woodedge Drive southern boundary–South of Jones Road West western boundary–Oak Valley eastern boundary–1/4 mile east of Jones Road."

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that the approximate boundaries of the plume provided in the HRS documentation record at proposal are under estimated. EPA's calculation of 695,927 square feet of contamination was derived by "merely 'connecting the dots.'" They stated that this method of estimation "totally ignores the upper zone of the Chicot aquifer" and that the extent of contamination in the upper Chicot is unknown, but may extend beyond the area defined in the HRS documentation record at proposal. They indicated that the wells used in the estimation are approximately 250 feet deep. They asserted that to "reach the points on the map, the plume needed to migrate above those wells in the shallower portion of the Chicot." They indicated that the "wells shown as impacted are those that the contamination found a pathway through to the underlying drinking water zone." The coalition, along with Ms. Hofbauer and Mr. Hofbauer, asserted that EPA should reevaluate the dimensions of the plume using more sophisticated computer modeling programs that are used in many other applications. They commented that "[b]ased upon sample results of contaminated wells, it is more likely that the plume in the shallow portion of the aquifer is more than twice the size of the by (sic) plume as depicted in Figure 4 [of the HRS documentation record at proposal] and extends north beyond Woodedge, south to Jones Road West, east past Barely Lane and west to Mile Drive." They also expressed concern that the plume may have affected over 200 homes and businesses in the area.

The coalition expressed concern that EPA failed to "properly quantify the extent of the plume" and created "a potentially unrealistic picture of the plume's true impact." It asserted that there appears to be a relationship between the extent of the plume and the age of the wells and that "[o]lder wells, where grout may have suffered degradation, could be impacted differently by contamination" indicating that "PCE may be moving down along well casings." It indicated that "[i]f newer wells, with fresher grout, are not contaminated (as appears to be the case) this suggests that PCE may be moving down along well casings." It asserted that the plume is moving based on the age of wells.

In response, the final extent of the plume has not been determined. After listing, but prior to final remediation efforts, the extent of the plume will be determined. Placing a site on the NPL is based on an evaluation, in accordance with the HRS, of a release or threatened release of hazardous substances, pollutants, or contaminants. However, the fact that EPA initially identifies and lists the release based on a review of contamination at a certain parcel of property does not necessarily mean that the site boundaries are limited to that parcel.

CERCLA section 105(a)(8)(A) requires EPA to list national priorities among the known "releases or threatened releases" of hazardous substances; thus, the focus is on the release, not on precisely delineated boundaries. Further, CERCLA section 101(a) defines a "facility" as the "site" where a hazardous substance has been "deposited, stored, placed, or otherwise come to be located." The "come to be located" language gives EPA broad authority to clean up contamination when it has spread from the original source. On March 31, 1989 (54 FR 13298), EPA stated:

> HRS scoring and the subsequent listing of a release merely represent the initial [emphasis added] determination that a certain area may need to be addressed under CERCLA. Accordingly, EPA contemplates that the preliminary description of facility boundaries at the time of scoring will need to be refined and improved as more information is developed as to where the contamination has come to be located; this refining step generally comes during the RI/FS stage.

The revised HRS (55 FR 51587, December 14, 1990) elaborates on the "come to be located" language, defining "site" as "area(s) where a hazardous substance has been deposited, stored, disposed, or placed, or has otherwise come to be located. Such areas may include multiple sources, and may include the area between the sources."

Until the site investigation process has been completed and a remedial action (if any) selected, EPA can neither estimate the extent of contamination at the site nor describe the ultimate dimensions of the NPL site. Even during a remedial action (e.g., the removal of buried waste), EPA may find that the contamination has spread further than previously estimated, and the site definition may be correspondingly expanded.

In addition, the objective of an SI is to gather information to support a site decision regarding the need for further Superfund action. It is not a study of the full extent of contamination at a site or a risk assessment. Often the scope of an SI can be limited to screening the site to determine if the site qualifies for the NPL. Therefore, limited samples are collected during this stage.

Furthermore, although expanding the extent of the plume would likely result in an increase in the site score, the listing decision would not change. As stated on page 7 of the HRS documentation record at proposal, the maximum value for the ground water migration pathway is 100, and this site scored 93. An increase in the number of actually contaminated targets could increase the site score from 46.5 to a maximum of 50.

2.1.3.4 Response Action

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that although EPA/TCEQ had provided a “temporary fix and placed numerous residents on a filter system,” this does not solve the problem. They asserted that the filters are not 100 percent effective and that the residents must deal with “red-tainted smelly water and mosquito-laden ponds in their backyards from the daily filter purges.”

Ms. Hofbauer and Mr. Hofbauer asserted that “the Agency should evaluate replacement of existing contaminated wells with new deeper double-cased wells” that will “retard the migration of contaminants into the lower clean water zones.” In addition, they would like existing wells to be “utilized where possible to remove the contamination that has already entered the Chicot.” They also indicated that if these actions are not considered, EPA “should be prepared to place the entire residential and business population on a clean water supply.”

The coalition stated that many of the affected residents are from relatively low or fixed income households and they are not able to replace their wells or buy water from a neighboring MUD. It stated that the cost of maintenance of the filters “might far exceed the cost of other ‘fixes.’” It commented that “[w]e need immediate studies of providing a suitable drinking water while the environment is cleaned up.”

In response, these comments pertain to the adequacy of the response efforts at this site, and as such are not relevant to the listing decision. However, EPA acknowledges that the application of filters to drinking water wells is a temporary action which was designed to alleviate the contamination of the

drinking water wells of these residents who are directly affected by the plume. Long-term remediation at this site has yet to be determined, and remedial alternatives will be evaluated during the RI/FS stage of the process.

2.1.3.5 Source Identification/Characterization

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that the HRS documentation record at proposal indicated that the focused site inspection report identified this site as a "plume originated from unidentified sources" while TCEQ stated that the contamination originated from Bell Dry Cleaners owned by HH Lucky T and was first detected in December 2000. They stated that Bell Dry Cleaners entered a voluntary cleanup program in July 2001 but, when it learned that many wells were contaminated with tetrachloroethylene (PCE), it withdrew from the program. They asserted that the residents "west of Jones Road were notified of the problem" in April 2002 and that the plume "had an additional two years to migrate." They commented that Bell Dry Cleaners had multiple RCRA violations, although no legal actions were taken. They asserted that "the source is well documented as Bell Dry Cleaners and should have been more thoroughly evaluated during the completion of this report [Focused Site Inspection Report]." They concluded that the residents in this area have been exposed to contaminated water during this time, and that Bell Dry Cleaners "should have been thoroughly evaluated to fully represent the seriousness of this situation." They asserted that the HRS documentation record at proposal indicates that the source of the PCE contamination is unknown, but "Bell [Dry] Cleaners was already identified as the source in recent enforcement actions by the TCEQ." Furthermore, Bell [Dry] Cleaners signed a consent decree acknowledging this in May 2002. They commented that previous studies by Geotech "already defined Bell [Dry] Cleaners and the shopping center for HH Lucky T as containing PCE contamination in soils and groundwater." They stated that soil samples collected from the shopping center near Bell Dry Cleaners "contained numerous degradation chemicals (i.e., DCE, vinyl chloride, etc.)" They commented that [t]his degradation normally occurs first at the originating source" and that based on this information, Bell Dry Cleaners should be "named the major contributing location."

The coalition commented that they "are not inferring [sic] that the Agency may be covering up for the lack of inspections and enforcement on their part or that of the TCEQ," but that, based upon the time of operation of Bell Dry Cleaners, "this plume may have been migrating for the entire 20 years."

Ms. Hofbauer and Mr. Hofbauer asserted that the "sources at Bell [Dry] Cleaner['s] former location should be removed or treated immediately to reduce further impact."

In response, according to Section 1.1, *Definitions*, of the HRS (40 CFR 300, appendix A), a contaminated ground water plume can be evaluated as a source for HRS scoring when the plume has no identified source of contamination. According to page 23 of the HRS documentation record at proposal, this site was evaluated as a ground water plume with no identified source

> because the exact source of the PCE, TCE and DCE contamination is unknown and the area of contamination remains undefined. Although previous investigations have suggested several potential source areas near the drinking water wells, adequate documentation attributing the hazardous substances to one or more of the potential source areas has not been identified based on available data. Therefore, a ground water plume with no identified source was used for HRS scoring.

Furthermore, as stated on pages 23-26 of the HRS documentation record at proposal, there are many sources that could be or have been contributing to the ground water plume. For example, as many as 19 additional dry cleaning establishments have been identified within a three-mile radius, making it difficult to attribute the contamination to any one source and to obtain individual background samples for each source. At the time of proposal, EPA did not have sufficient evidence to determine whether the contamination was attributable to Bell Dry Cleaners or any other particular source. During the RI/FS process that began on August 25, 2003, the extent of the site will be further characterized and source(s) of the contamination identified.

2.1.3.6 Ground Water Migration Pathway

Commenters raised several issues specific to the manner in which the ground water pathway was evaluated. These comments are addressed below.

2.1.3.6.1 Analytical Methodology

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that the drinking water samples collected from the wells during the SI were analyzed by EPA Method 524.2 for organic drinking water analysis. They asserted that the RCRA Technical Enforcement Guidance Document (TEGD) specifies that "volatile analyses should be performed by following EPA Method 8260." They questioned the significance of following a different method and the quality of the sample results. They stated that EPA "may not truly know the significance of the situation if the levels of contamination are lower based upon the analytical method."

In response, regardless of which analytical method is used to analyze the samples, these comments have no effect on the site score or the listing decision for this site. EPA used an appropriate analytical method to analyze the samples used to score the Jones Road Ground Water Plume site. EPA Method 524.2, "Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry," is an approved method for the identification and measurement of purgeable volatile organic compounds in ground water and drinking water. The method detection limit for this method varies from 0.02 ug/L to 1.6 ug/L. The SW-846 Method 8260, "Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)," is used to determine volatile organic compounds in a variety of solid waste matrices, including aqueous sludges, caustic liquors, acid liquors, waste solvents, oily wastes, mousses, tars, fibrous wastes, polymeric emulsions, filter cakes, spent carbons, spent catalysts, soils, aqueous, and sediments. The method detection limit for this method is 5 ug/L.

EPA method 524.2 was chosen as the appropriate method for the analyses of the samples used to score the Jones Road Ground Water Plume site because of the lower and, therefore, more sensitive detection limits. This method provides analytical results that would be quantifiable at lower concentrations than those obtained using SW-846 Method 8260. EPA Method 524.2 was also chosen to determine if the contamination was below the EPA MCL for PCE in drinking water (5 ug/L).

With regard to the requirements in the RCRA Technical Enforcement Guidance Document, these requirements do not pertain to this site because it is not a RCRA facility. These comments do not affect the site score.

2.1.3.6.2 Background Locations

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, questioned whether the samples collected from Echo Spring Lane were upgradient of the contaminant plume since several wells on this road were contaminated with PCE.

The coalition commented that "diffusive dispersion can occur against an advective transport gradient," indicating that the concentrations detected in several wells on Echo Spring Lane are not "consistent with the use of this area as up gradient for the purpose of migration pathway delineation." It stated that background concentrations from upgradient wells "should have been determined from wells outside the plume."

In response, for HRS purposes, the background locations are sufficient to establish a significant increase in PCE levels at this site. According to the HRS, a background sample is used to determine a background level of contamination that provides a reference point to evaluate whether or not a release of a hazardous substance from the site has occurred. According to page 67 of the HRS Guidance Manual, a background level "should reflect the concentration of the hazardous substance in the medium of concern for the environmental setting on or near a site," and it "does not necessarily represent pre-release conditions, nor conditions in the absence of influence from source(s) at the site." As stated on page 34 of the HRS documentation record at proposal, the background samples used to establish an observed release (GW-20, GW-50, GW-51 and GW-52) did not contain any PCE, TCE, or DCE. Therefore, they were chosen to represent background conditions at this site.

With regard to the comments that the background samples may have been collected in an area that was not upgradient of the site and that they may have been influenced by the contamination at the site, if diffusive dispersion is occurring, then the actual amount of contamination in the background samples could be lower, reinforcing the fact that the contaminated samples meet observed release criteria. Therefore, the basis for establishing an observed release at this site would not be undermined.

2.1.3.6.3 Sampling Techniques

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that true ground water conditions have not been determined. They stated that the QAPP indicated that each well sampled was 150 feet deep or more and was sampled after 15 minutes of purge, indicating that this was not sufficient time to obtain a representative sample. They asserted that, based on a liberal pumping rate of 10 gpm, 150 gallons of water was removed and that, per the TEGD, "at least 3 well volumes should be removed to collect a representative sample." They indicated that, "[g]iven the average depth of a well, that would mean between 300 to 1000 gallons (depending upon well depth and casing radius) would need to be purged to obtain a representative sample." They questioned the accuracy of the results from these wells.

In response, the ground water conditions, while perhaps not completely investigated, are sufficiently identified for HRS scoring purposes. They are sufficient to establish an observed release and to identify actual contamination of targets which document an HRS score of greater than 28.50. As noted previously, a more thorough analysis of the extent of contamination will be performed at a different stage of the Superfund process.

Furthermore, the objective of well purging is to obtain formation water from the targeted sampling point with no alteration of water chemistry. Typical sampling procedures currently utilized by EPA and TCEQ focus on a low-flow sampling approach rather than the 3-5 well volume approach outlined in the TEGD. This low-flow approach minimizes the ground water disturbance in and around the well. However, sampling private water supply wells poses some unique problems since the well screens are typically much longer than in monitoring wells, the pump speed and production rate cannot be controlled at the surface, the well is designed to maximize the production of water as opposed to sampling a specific interval, and a sampling port at the surface may not always be available at the well head. Because of these factors, purging and sampling a private supply well is less precise than for a monitoring well. The objective of purging a private well for 15 minutes is to produce sufficient water to clear the existing water lines prior to the sampling point while minimizing the disturbance in the aquifer. This sampling procedure represents a compromise between collecting a representative sample and the physical limitations of a private well. All samples used to document the score were collected according to the EPA-approved State QAPP. Furthermore, the HRS is a screening tool, and the sampling activities used to score this site are consistent with the HRS. The HRS requires that the background and release samples be collected using the same sampling and analysis methods. These samples should be collected from the same aquifer, at the same time, under the same physical conditions (e.g., meterological conditions), and the same environmental setting (e.g., topography). The sampling procedures used for the collection of these samples were sufficient for HRS purposes of establishing an observed release. The plume will be further characterized at a later stage of the Superfund process. Therefore, these comments do not affect the HRS site score.

2.1.3.7 Additional Pathways

The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that EPA did not evaluate the surface water migration pathway, soil exposure pathway or the air migration pathway. They indicated that "[i]t is known that the highest concentrations of contaminants are found in the soils in and around Bell [Dry] Cleaners" which is in a large public shopping area with restaurants and businesses. "A large transient population on a daily basis frequents the shopping center" and, with the construction or new businesses and the renovations of existing business, these individuals along with the employees of the businesses may be exposed to the contamination. The coalition, along with Ms. Hofbauer and Mr. Hofbauer, commented that any residents in the area may be exposed to the contamination when there are any disturbances to the soil (e.g., foundations, pool installation). They disagree with EPA's assessment that evaluating the soil exposure pathway "would not significantly affect the site score." They indicated that the "significance of this exposure should certainly be considered and would likely raise the HRS score" and that the "need for immediacy of action on the part of the Agency based upon this elevated score would be clearly accentuated."

A private citizen commented that the surface water migration pathway was not evaluated and that the "[s]tormwater is drained off through open drainage ditches." This citizen indicated that water flows in a

southerly direction and that there are several MUDs along with wells operated by the city of Houston to the south.

In response, EPA agrees that there may be other routes of exposure at this site. However, the HRS does not require scoring all four pathways, if scoring those pathways does not change the listing decision. For some sites, data for scoring a pathway are unavailable, and obtaining these data would be time-consuming or costly. In other cases, data for scoring some pathways are available, but will only have a minimal effect on the site score. In still other cases, data on other pathways could substantially add to a site score, but would not affect the listing decision. The HRS is a screening model that uses limited resources to determine whether a site should be placed on the NPL for possible Superfund response. A subsequent stage of the Superfund process, the RI, characterizes conditions and hazards at the site more comprehensively.

To the extent practicable, EPA attempts to score all pathways that pose significant threats. If the contribution of a pathway is minimal to the overall score, in general, that pathway will not be scored. In such cases, the HRS documentation record may include a brief qualitative discussion to present a more complete picture of the conditions and hazards at the site. As a matter of policy, EPA does not delay listing a site to incorporate new data or score new pathways if the listing decision is not affected.

EPA must balance the need to fully characterize a site with the limited resources available to collect and analyze site data. For this reason, the EPA generally will not score additional pathways upon receiving new data as long as the site still meets the HRS cutoff score. However, any additional data characterizing site conditions could provide useful information during the RI.

The HRS is intended to be a "rough list" of prioritized hazardous sites; a "first step in a process--nothing more, nothing less" Eagle Picher Indus. v. EPA, 759 F.2d 922, 932 (D.C. Cir. 1985) (Eagle Picher II). EPA would like to investigate each possible site completely and thoroughly prior to evaluating them for proposal for NPL, but it must reconcile the need for certainty before action with the need for inexpensive, expeditious procedures to identify potentially hazardous sites. The courts have found EPA's approach to solving this conundrum to be "reasonable and fully in accord with Congressional intent. "Eagle Picher Industries, Inc." v. EPA, (759 F.2d 905 (D.C. Cir. 1985) Eagle Picher I).

2.1.4 Conclusion

The original score for the Jones Road Ground Water Plume site was 46.50. Based on the above response to comments, the site score remains unchanged. The final score for the Jones Road Ground Water Plume site is:

Ground Water	93.00
Surface Water	Not Scored
Soil Exposure	Not Scored
Air Pathway	Not Scored
HRS Site Score	46.50